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ABSTRACT

A study evaluated the IBM Principles of Adult Literacy (PALS) program in 1988-89. Three adult education centers in Georgia (two with PALS and one without) were studied to determine whether, for adult nonreaders, the PALS program produced gains in reading equal to or greater than those produced by a traditional noncomputerized program. In addition to reading, students' progress in writing and student and teacher attitudes toward the PALS program were evaluated by means of assessment, observations, and interviews collected during an 8-month period. The study found that adults in the PALS program performed as well as adults in a traditional noncomputerized literacy program, although neither group as a whole demonstrated significant progress on the reading or writing measures. There was a significantly lower dropout rate, but no difference in the attendance rate for the PALS program than for the traditional program. Student satisfaction with the PALS program was high, their attitudes toward the program were good, and they felt they improved their reading. Teachers were generally favorable toward the PALS program although they felt the need to use it in conjunction with other teaching methods and materials. Strengths of the PALS program centered around the use of computers and the inclusion of touch typing skills in the instruction. Weaknesses of the PALS program included the difficulty teachers had getting the writing program started and problems with typing for the older students. The study concluded that the PALS program may be a beneficial addition to a literacy program, but it is not a panacea for adult literacy education. (KC)

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INTRODUCTION

The Center for the Study of Adult Literacy at Georgia State University conducted an evaluation study of the IBM Principles of Adult Literacy (PALS) program in 1988-89. Three adult education centers in Georgia participated in the study which was funded by the State of Georgia Department of Adult and Technical Education. Two of the centers in the study, Tillinghurst Adult Education Center in Columbus and Forsyth Street Adult Education Center in Macon, opened PALS labs in the fall of 1988. The third, DeKalb Adult Education Center in Clarkston, provided a comparison, non-computerized program. The purpose of the evaluation study was to determine if, for adult non-readers, the PALS program produced gains in reading equal to or greater than those produced by a traditional non-computerized program. In addition to reading, students' progress in writing and student and teacher attitudes toward the PALS program were assessed. This report will present the results of the assessment, observations, and interviews collected over an eight-month period in the three centers. It will also discuss the perceived

strengths and weaknesses of the PALS program and related issues and concerns in using PALS in adult education settings.

Background Information

The PALS program was developed in response to the high rate of adult illiteracy in America with the related costs of this problem in both dollars and quality of life. The program, developed by John Henry Martin and published and marketed by IBM, is designed to teach adolescent and adult illiterates to write, read, and touch type using a computer InfoWindow system with instructional videodiscs, a Work Journal, word processors and software, and typewriters. Students in the class are to have an IQ of 75 or above, a standardized reading test score at or below the fifth grade, an inability to write a simple sentence, and a lack of serious hearing, vision, or physical impairments. The system is designed for 16 students who work in pairs in a specially equipped, office-like classroom for 90 to 100 hours (20 weeks at 1 hour per day). There are three phases to the instructional program. Phase 1, Invention of the Alphabet, is a myth

about the invention of the alphabet that introduces the phonemic principles of the alphabet presented through the InfoWindow. Phonemic spelling is used. Touch typing is introduced in the second half of this phase. Phase 2, Work Journals, uses phonemic exercises presented on the InfoWindow and in the Work Journals. Practice with touch typing continues. Phase 3, Personal Writing, applies the principles learned in the first two phases. It introduces the students to word processing, writing a Bio-sketch, and preparing a personal resume and job applications while continuing touch typing instruction. Students keep track of their progress in Phases 1 & 2 in their Work Journals. Teachers are trained in how to operate the system and in all instructional components and requirements. Initial training for key personnel is done by IBM in four-day training workshops. Those key persons then train the other PALS Lab staff members in their own centers.

Formal evaluation procedures included in PALS are:

Pre-Tests

- Standardized Reading Achievement Test
- Student Data Sheet
- Functional Literacy Test

Mid-Point Tests

- Phonemic Word Making Test
- A Writing Sample
- The Bio-Sketch

Summary Evaluations

- Student Data Sheet
- Functional Literacy Test
- Personal Writing Samples
- Personal Resumé & Job Application Forms
- Standardized Reading Achievement Test (different from pretest)

The mid-point evaluations are to be used to monitor student progress and to determine whether students should proceed in the program or be recycled back through earlier parts of the instructional program. Upon completion of the course, students are to be presented with a certificate (Martin, 1987).

Prior Research

The PALS program is reported to have been used successfully in several different settings. In a field test conducted by the developers at Carzoda High School in Washington, D.C., 23 students who were "severely retarded in reading" completed the PALS program. They demonstrated a significant mean gain in reading of 28.7 months ($p < .01$) on the California Test of Basic Skills (Martin, 1983). Their reading achievement improved from a pretest average score of 4.13 to a posttest average score of 7.03. Attendance increased from 67% to 98%, and they demonstrated touch typing scores of 15 to 25 words per minute. Similarly Florida high school students ($N = 56$) made an average gain on the Nelson Denny Reading Test of 2.8 years; adult English-as-a-second-Language (ESL) students showed an average gain of 2.2 years on the Test of Adult Basic Education (TABE) (IBM Training Workshop, 1988).

There have been very few independent evaluations of the PALS program. One such evaluation at Ft. Benning, Georgia was intended to produce three case studies. However, only one person actually completed

the 20-week PALS program (a 67% dropout rate). That person, a 27-year-old male in the U.S. Army, increased from a 4th to 7th grade level in reading and showed a 13% increase in writing as measured by the JHM writing instrument. He also gained 2 years, 4 months in reading vocabulary and comprehension as measured by pre- and post-test scores on the TABE (Raaen & Deitz, 1988).

The effectiveness of the PALS program in adult literacy instruction was assessed in a school system in Victoria, British Columbia (Evans, Falconer, Groves, & Rubin, 1988). Students were adults in the area recruited to participate in the literacy instruction program. A control group was formed from the waiting list of persons wishing to enroll in the second phase of the pilot project. There were originally 48 experimental subjects (3 groups of 16 each) and 10 control subjects. Results at the end of the 20-week study were obtained for 27 experimental and 10 control subjects (a 44% dropout rate). Students completing the program demonstrated an average post-test increase of three grade levels on the Woodcock Reading Mastery Test (Form B) over their pre-test scores. There also was a

significant increase in these students' PALS Functional Literacy Test scores. Significant gains were obtained on the writing test (British Columbia Language Arts Pilot Test), the PALS spelling test (Phonemic Word Making Test), and the PALS typing records (an increase of 9 words per minute). The control group, who received no literacy instruction during the 20 weeks, did not demonstrate significant increases on any of these measures. Observations of the program and interviews with the students revealed positive feelings about the program. Subjects also demonstrated a significant increase in scores on the Coopersmith Self-Esteem Inventory. The researchers state "it may be generally concluded that the PALS pilot program has been successful in increasing the literacy of adult clients, and in shifting their self image in a positive direction" (p.70). The only dissatisfaction expressed was by clients reading at the Grade 5 level or higher (the upper limits of the PALS program). They did not feel challenged by the PALS program. The researchers recommend including PALS as a major element in the adult literacy program supplementing it with additional

software in spelling, reading, writing, and computer literacy. They also recommend development of a follow-up program to PALS and the addition of a personal counseling component to assist clients with career and personal goal setting.

Research on the PALS program has been generally favorable; however, no studies are reported comparing results of the PALS program to results obtained with another literacy program. The question still remains as to whether PALS is as effective as or more effective than a non-computerized literacy program. That was the overall question investigated in this evaluation study.

METHODOLOGY

Three adult education programs were included in this study. Two of them, Columbus and Macon, used PALS Labs and one of them, DeKalb, did not. Subjects were all adults 18 years of age and over who enrolled in the basic literacy programs (day and evening classes) at the three centers. There was one PALS Lab at the Columbus site and two at the Macon site. In each case, the PALS Lab was housed in a room remodelled for that specific purpose. Stations were set up and equipped

according to the general specifications by IBM (see Martin, 1987). The lab at the Columbus site had no additional materials, but a Reading Lab used by some PALS students, was located across the hallway. It had a variety of reading materials, kits, workbooks, and skills materials. The PALS Lab at the Macon site had four additional Apple computers with literacy software such as Language Experience Recorder, Math Blaster, Flash Card Program, and other reading and math games. A few reference books were available, but neither lab had the high interest/low vocabulary adult reading books specified in the PALS manual. Recruitment for the PALS program was through word of mouth, referral from the GED program and tutors, and radio, television, and newspaper ads. Both centers had public openings of the PALS Labs and received good community/business support and publicity for their programs.

The DeKalb program was located in a similar sized room arranged with tables and chairs, some study carrels, and bookcases for materials. It was equipped with a wide range of reading materials such as, Laubach readers, Science Research Associates kits, reading

programs, and skills workbooks. Each student had a folder in which her/his individual prescription and weekly assignments were recorded. Thus students could check their folders, locate their materials, and begin working upon arrival in the center. This center has discussed adding computer-assisted instruction to their program as a reinforcement of the basic instruction, but not as the primary instructional tool. Recruitment at the DeKalb center is done through word of mouth, referral from social service agencies, and referral from the Technical School and GED program (students whose literacy level is too low to cope with either of these programs).

Classes were held in each of the three centers daily with students coming one to four times per week. Classes varied in length from one to four hours per day. All had evening as well as day time classes. A larger proportion of students at the comparison center was enrolled in evening classes than at the PALS centers. Each center employed one person as a lead teacher or literacy director working under the director of the adult education center. This person was a full-

time, daytime employee. All other instructors including the primary evening teacher were part-time employees. Centers supplemented these teachers with instructional aides and/or volunteers. All of the programs were free.

Classes were observed on a regular basis by a graduate research assistant from the Center for the Study of Adult Literacy. This person also conducted all the student and teacher interviews and collected all data (demographic, test, attendance, and program). The Project Director also visited all the programs and talked with the center directors and lead teachers. All tests were administered by the teachers and assistants. Final data for the PALS classes were obtained when the student completed the PALS program (all three phases). Final data for the non-computerized class were collected at the end of five to six months instruction (approximately the same amount of instructional time).

Description of Sample

A total of 50 students enrolled in the PALS program at one site and 85 at the other making a total

of 135 PALS program subjects. Sixty-nine of these subjects (51%) completed the PALS program. Students completing the program were those whom teachers reported had the 100-hour instructional program and who took at least one of the post-test assessment measures. In many instances it took students longer than 20 weeks to complete the program. For the students who completed the program, the average attendance per student was 122.15 hours (standard deviation = 98.86) for the PALS students and 120.75 hours (standard deviation = 54.72) for the comparison students. Thirteen of the PALS students (10%) not completing the post-test assessment had been recycled and were still receiving PALS instruction at the time of final data collection. A total of 74 students enrolled at the non-computerized program site and 12 of them completed 20-weeks of instruction (a time period comparable to the PALS program) and were post-tested. Thus, the dropout rate for the PALS sites was 39% while it was 84% for the non-computerized site [χ^2 (1, N = 196) = 29.27, $p < .001$].

Demographic Data

Table 1 presents a summary of the demographic data for the experimental and comparison groups. There were no differences between the two groups in sex, race, employment, or level of education. More experimental group subjects had taken previous literacy courses than had comparison group subjects (80% vs. 50%). They were also more likely to be receiving additional literacy training (e.g., reading lab or tutorial assistance) than the comparison group. There were more non-native English speaking students in the comparison group than in the experimental group (42% vs. 22%). All of the non-native English speaking students in both groups could read in their native language.

There appear to be some differences in the students in the literacy classes offered during the day and in the evening. Those during the day were about 2/3 female while evening classes were 2/3 male. Sixty-one percent of those attending during the day were unemployed while 77% of those attending in the evening were employed. Otherwise the two groups (day and evening) are similar in demographic characteristics.

RESULTS

Reading & Writing Test Results

Reading achievement was measured by administration of the Test of Adult Basic Education (TABE), Level E, Forms 5 & 6 as pre- and post-tests (CTB/McGraw-Hill, 1987). The Reading Vocabulary and Reading Comprehension scores were combined for this analysis. This test was selected because it was already given by all three centers to all entering students upon their enrollment in basic literacy classes.

Results of the TABE analyses are presented in Table 2. There were no significant differences between pre-test and post-test scores on the TABE for either the experimental or the comparison group. However, the gain for the experimental group approached significance ($p = < .057$) indicating a trend toward improved performance on the TABE as a result of participation in the PALS program. There was a significant difference in the pre-test scores between the experimental and comparison groups [F (1,201) = 123.65, $p < .0001$]. The lower pretest mean score for all PALS subjects (PALS M = 2.87, N = 129, Comparison M = 5.46, N = 74] may have

been due to the fact that the PALS program is designed for students reading at or below the 5th grade level. Therefore, students reading above that level were screened out and placed in other reading programs at the adult education centers. Students at both levels of performance (below and above 5th grade) were included in the basic literacy classes at the comparison site. Analysis of covariance of the TABE post-test scores using the TABE pre-test scores as the covariate indicated no significant differences in post-test scores between the experimental and comparison groups when their pretest scores were held constant [$F(1, 1, 50) = 3.19$, $p < .16$].

Because the PALS program was implemented somewhat differently at the two experimental sites, data were also analyzed by site. There was a significant difference between TABE pre-test and post-test scores for one of the sites but not for the other. These data are presented in Table 3. Students in the PALS program at the Columbus center demonstrated a significant gain in reading on the TABE while PALS students at the Macon center did not.

Initial writing samples (pre-test) were collected on the PALS Student Data Sheet for the experimental group. No initial writing samples were collected from the comparison site. Final writing samples (post-test) were collected for both groups on the topic, "If I had a million dollars, I would give it to _____ because _____." Writing samples were scored using a process scoring technique which evaluated the content and communication of the writing rather than the mechanics. All writing samples were scored by two trained raters who were blind to the treatment condition of the subjects. See Appendix A for a copy of the writing test and the scoring system.

Table 4 gives the results of the writing assessment. There was no significant difference between the pre-test and post-test writing scores of the experimental group nor was there a significant difference between the writing post-test scores of the experimental and comparison groups. Participation in the PALS program had no effect on these groups' writing performance.

Writing scores were also analyzed separately by experimental site. There was no difference in pre- and post-test writing scores for the students in the PALS program at the Macon center. Those at the Columbus center scored significantly lower on the writing measure following their participation in the PALS program (see Table 5).

There were no differences in pre-test scores on the TABE or the writing test for students attending day vs. evening classes.

Analysis of Other Test Data

The Functional Literacy Test was administered to the PALS students as a post-test only. It had been planned to administer it as both a pre-test and a post-test as recommended in the PALS manual. However, the PALS teachers felt the test was too difficult for the students at the beginning of the program so only post-test scores are available. No norms or criterion scores are given for the Functional Literacy Test. Students in the present sample scored an average of 64.75 % (standard deviation = 21.92 %). The average post-test scores on this test for the PALS students in

the Victoria study was 76.41 % (Evans, Falconer, Groves, & Rubin, 1988, p. 30). Students in the evening PALS classes scored significantly higher on the Functional Literacy Test than did those in the day PALS classes [$F = 4.61$ (1,40), $p < .04$].

Two of the sites, Columbus and Macon, gave additional oral word reading pre-tests. In Columbus entering students were given the Schonell Reading Test and in Macon they were given the Slosson Oral Reading Test. Students at the Macon center were also given the Slosson as a post-test. Analysis of these scores is presented in Table 6. There was a significant difference between the Macon center students' pre- and post-test scores indicating a gain in oral reading of words as a result of participating in the PALS program.

Mid-point assessments in the PALS program were made by administering the Phonemic Word Making Test and scoring the Bio-sketch produced early in Phase 3. The average score on the Phonemic Word Making Test was 78.4% (standard deviation = 15.80, $N = 25$). Students received an average writing score rating (using the same process writing scoring system as for the writing

tests) of 4.10 (standard deviation = 0.995, N = 30). Several drafts of the Bio-sketch were produced and only the final one was scored. The PALS manual provides no criterion or norms data for either of these measures.

Intercorrelations Among Variables

Table 7 presents the means and standard deviations for all variables for the total group and the experimental and comparison groups. Intercorrelations among the demographic and test variables for the experimental and comparison groups are given in Table 8. There were significant correlations between the pre- and post-test scores on the TABE, the Slosson Oral Reading Test, and the writing measure. There also were significant intercorrelations among these variables and the Functional Literacy and the Phonemic Word Making Tests supporting the relationship among the receptive and expressive aspects of literacy.

There was a significant negative relationship between age and the writing variables (older students tended to score lower on writing than younger ones). Being unemployed was also associated with lower writing scores. Taking previous literacy courses and receiving

additional literacy instruction along with PALS was inversely related to scores on the literacy and writing measures. That is, students with previous and/or additional literacy instruction tended to score lower on the TABE, Slosson, and writing test. Perhaps teachers were recommending additional instruction for those judged to be the weakest in literacy attainment. Attendance was positively related to age, unemployment, speaking English as a nonnative language, gender (male), and taking previous and/or other literacy courses. However, it was negatively related to reading and writing tests scores.

Interview and Observation Data

Teacher Interviews

All teachers and aides were interviewed at the beginning and end of the program. A sample of students from both the daytime and evening classes at the PALS Centers was interviewed at the beginning and end of the program. Due to dropouts it was not always possible to interview the same students both times. A total of 28 students was interviewed initially and 41 were interviewed at the conclusion of the program. These

figures included 15 people who were given both the initial and final interviews. Copies of the four interview forms are in Appendix B.

A summary of the responses obtained on the teacher interview is presented in Tables 9 (Initial Interviews) and 10 (Final Interviews). Most of the teachers were assigned to teach in the PALS program rather than selecting it as a method of instruction. Almost all of them had previous adult literacy instruction experience, many at their current center. Experience ranged from 0 to 15 years with a median of 2-5 years. Previously most of them had used phonics methods and materials and/or the Laubach method and materials. The majority of the teachers (67%) felt their training did not prepare them to teach the PALS program. There were actually two types of training received by this sample of teachers. One or two teachers from each site had 4 days of training by IBM in Atlanta. They were then responsible for teaching the other staff at their centers. Apparently it was this latter step that was viewed as less than adequate. Four teachers claimed to be self-taught and others noted that there was not

enough hands-on training with the program materials and equipment nor enough time (1 day) devoted to training.

At the beginning of the program the teachers liked the computers and the typing/word processing program in PALS. They noted that the simultaneous audio/visual presentation of sight words and the phonemic approach were positive instructional features of the program. They also indicated that the students were motivated and felt good about participating in the program. Their initial concern was the story (the myth about the invention of the alphabet in Phase 1). They indicated already at the beginning of the program that it was too long, boring, and child-like. They also noted the poor construction of the Work Journals (the covers were already falling off).

Teacher expectations for this program were that it would be instrumental in raising the reading levels and skills of the students. They also hoped that it would raise students' self esteem and be an enjoyable experience for them.

At the conclusion of the program PALS teachers were most enthusiastic about the typing program,

largely because it was popular with the students. Others especially liked the phonemic approach and the personal writing program. They were still concerned about the story, however, expressing a need to start the phonemic program sooner as well as their original concerns that the story was too long, boring, and not appropriate for adults. They also noted that it was difficult to get the personal writing phase of the program started. They commented that it was hard for the students to "get going" in writing. There were some comments also indicating that the typing program was difficult for older adults with poor vision, bifocals, and arthritis in their hands.

When asked if their expectations were met, 40% said "yes," 30% "no" and 20% "partially." They noted that the student's self-esteem had improved but that they were disappointed in the students' reading progress.

Student Interviews

A random sample of 28 students representing the various day and evening classes at the two PALS centers was interviewed at the beginning of the program. All

of those initially interviewed who had not dropped out (15 students) were reinterviewed at the end of the program. An additional 26 students were randomly selected to be given the final interview. Tables 11 & 12 present a summary of these student interviews.

Ten of the students initially interviewed were assigned to the PALS class, but 8 others had chosen to attend after hearing about the program in radio or television advertisements. Students were attending literacy classes to learn to read, to further their education, and because their family or friends had suggested it. Two, who were non-native speakers of English, were attending to learn English. Initially they liked working with the InfoWindow (the computer interactive disc which is predominant in Phase 1 of the program) and the typing program. They felt the program was easy to use and liked the way the program "tells you how to pronounce and spell words." Several liked everything about the program noting that it was interesting and that they felt special getting to use computers ("Computers are for special people"). Most students (79%) found nothing they didn't like about the

program. A few noted it went too fast and others (older students) found the typing difficult to do. Two commented that it wasn't as good as a tutor, their previous mode of receiving literacy instruction.

When asked what they hoped to accomplish in this class most said to learn to read and write better. Others wanted to learn to read the paper, to read the Bible, or to write a letter to a parent or child. They also hoped to learn to speak better (ESL students), to learn computers, and to learn to spell. Their reasons for wanting to improve their reading were to get a job (54%), to get a GED or further education (32%), and to master things better.

Observation of Classes

Classes were observed by a Graduate Research Assistant and occasionally by the Project Director. Anecdotal notes were kept of these observations. Several trends are found in these notes. PALS classes were rarely full at any given time. Usually there were only 7 to 8 students in the Lab at any one time rather than the 16 who could be accommodated. Although both sites began by assigning students partners with whom

they might work, in fact, rarely were students working with partners. The high rate of absenteeism and the high dropout rate apparently accounts for both the lower number of students in the Labs at any one time and the abandonment of the partner system. Attendance in all sites was greatly affected by the weather and approaching holidays. Both PALS programs encouraged students to use PALS plus a variety of other reading instructional approaches. At one center, other computers and software were incorporated into the Lab program. At the other center, many students went to another classroom for a Reading Lab program. A number of students in both programs also received tutorial assistance. These practices appeared to reflect the staff's feeling that the PALS program was useful in conjunction with other reading instruction, but not as the sole method of instruction. There appeared to be very little communication between the day and evening programs at two of the three sites. There was a full-time teacher in the day program at both of these sites but in neither case did she meet regularly with the evening part-time teachers. At the other site, there

was a reading program coordinator who communicated with both the day and evening staff. One site screened students who enrolled in the PALS program, systematically eliminating those with handicaps or non-native English speakers. The latter were encouraged to enroll in the PALS program at the other site. Teachers at all sites were empathetic toward students and hoped that the programs would be helpful to them. They were all very concerned about the need to test students, expressing doubt that their students would "do well" on the TABE test.

Reasons for Dropping Out of the Program

Students were interviewed to determine the reason for their dropping out of the program. In most instances the students just "disappeared." That is, they failed to come back. In those cases they were telephoned to find out why they had dropped out. A large number of those could not be contacted as they had moved, their phone was disconnected, or they were not home on repeated calls. Table 13 summarizes the reasons given for dropping out. Most of these are the standard reasons cited for not continuing in adult

literacy classes around the country--job, transportation, child care or family reasons, health, class time, or moving. Several students opted to drop the PALS class but to take another class or to go back to their tutor. In no instance did students cite the PALS program or their instructional progress (or lack of it) as their reason for dropping out of the program. There were no pretest differences on the TABE or the writing tests among those students who completed the program, dropped out, or were recycled in the PALS program.

DISCUSSION

Literacy Achievement

The primary question investigated in this evaluation study was whether the PALS program produced gains in reading equal to or greater than those produced by a traditional non-computerized program. There was not a significant difference in reading achievement gains on the TABE between the experimental group (the two PALS centers) and the center using the traditional program. However, there were significant gains in reading on the TABE for PALS students at one

center and on the Slosson for PALS students at the other center. There were no significant gains in writing for students in either program, although there was a significant decrease in writing for students at one of the PALS centers. There are several possible reasons for these results.

One possibility is that the PALS program was not fully implemented in the way intended by the author/publisher at either of the sites. Many of the students were receiving additional reading instruction, not just PALS instruction, and many had received such instruction in the past. The program was, in general, delivered to students individually, not in pairs as specified by the program manual. When the Work Journal records were examined, 31% of the students whom teachers said had completed the program indicated they were working below Disc 12. It is not clear whether these students failed to complete the program or simply failed to mark their progress in their Work Journal. The writing aspect of PALS (Phase 3) may have been implemented less completely and less enthusiastically than the other aspects of the program and little

outside reading occurred. Teachers expressed the need for more training in how to use PALS and especially in how to implement Phase 3 (personal writing). This perceived lack of sufficient training may have prevented the PALS program from being fully implemented.

Another reason may have been the reading measure, the Test of Adult Basic Education (TABE). Teachers at all three sites expressed their concerns about this test, stating that it was too difficult for these students and did not measure student progress. They were especially concerned about the revised (1987) edition of this test (the one used in the present study).

The Literacy Center at Teachers College, Columbia University has recently reviewed the TABE, comparing the 1976 and 1987 editions (Hill & Parry, 1988). They note that the 1987 edition demonstrates "closer adherence to the pragmatic model [of reading comprehension] than does the old" (p. 49) incorporating narrative and expository material of interest to adults in literacy programs (e.g., passages about seeking

employment, health problems, and being a single parent). However, they note that the items and especially the distractors require readers to separate their own background knowledge about the subject from the information in the text; that is, the reader must keep the text autonomous (p. 52). This approach "can be quite frustrating to adults who, though they may not be able to read well, have learned to draw on a range of skills in different types of oral interactions" (p.54). They are encouraged to use background knowledge and context in the reading the passages but not in answering the test items. Hill and Parry recommend that the TABE be restructured to include two types of passages with congruent test items--autonomous passages and pragmatically-oriented passages (p. 55). This critique of the TABE certainly is valid for the population in the present study. The students were all adults with broad life experiences. Most have years of experience as an illiterate or semi-literate person in a literate society. They are accustomed to using all of the oral and social context in a situation to interpret its meaning. Thus, the mixed signals given

by the TABE as to whether or not to use this pragmatic information may have been particularly disturbing to these students.

The concern with the appropriateness of the TABE for this population is even deeper, however. Teachers complained that it was too "school-like", that the adults were "frightened off" by the testing situation, and that the level of the test was too difficult. These are common complaints in adult literacy programs. The practice in all three of these sites had been to test incoming students with a standardized test (the TABE) but not to give any sort of post-instruction assessment. Each center also used another way of placing students in literacy materials for instruction. One center gave the Schonell Reading Test, one the Slosson Oral Reading Test, and one the Laubach Diagnostic Placement Test. Both PALS sites gave these tests, but the results could not be used for placement as all students begin PALS with Phase 1 regardless of prior reading level. The center giving the Slosson Oral Reading Test as a post-test did have significant gains on this word reading test, but not on the TABE.

Students completing the PALS program at that center demonstrated a significant gain in reading on this measure, supporting the teachers' contention that the students did improve their literacy skills even though improvement was not demonstrated on the TABE. They were able to read more words in isolation at the end of the program than at the beginning even though they did not demonstrate improved skills in reading comprehension as measured by the TABE. Students at the other PALS center did demonstrate a significant gain on the TABE, but they were still reading at a very low grade level ($\underline{M}$ = 2.68). It may be that students in the PALS program are reading at such a low level of literacy even on completion of the program that a word reading test is a more appropriate measure of literacy than is a standard reading comprehension test. (Level E of the TABE ranges in difficulty from grades 2.6 to 4.9.) However, this suggestion is not compatible with assessment of comparable levels of literacy in young developmental readers for whom reading comprehension is assessed by measuring their understanding of text at the second and third grade levels. It is possible that

the negative attitudes by the students and teachers toward the TABE affected the students' performance on the test. At the request of the staff, the TABE was administered by the teachers, not the graduate research assistant as originally planned. It may also be that the PALS program provides insufficient comprehension instruction and/or insufficient reading practice to improve more than recognition of words in isolation.

It had been intended to measure gains on the Functional Literacy Test for the PALS students. However, the teachers at the two PALS centers were extremely upset at the request to administer it as a pre-test. They felt that, although it was a pragmatic literacy test, it was far too difficult for the students at the beginning of the program. The average score obtained by these students on this test at the end of the program was 65.39%. Students in the Victoria PALS program had a mean post-test score on this measure of 76.41% (Evans, Falcomer, Groves, & Rubin, 1988, p. 30). Thus the students in the present study did not demonstrate as much progress on the Functional Literacy Test as did students in the

Victoria study.

Another problem was the small number of students who completed the programs, especially in the comparison group. Significant gains in reading might have been achieved had there been more subjects with pre- and post-test data and had the numbers in the groups been equal.

It is unclear why earlier studies of the PALS program demonstrated significant gains in reading and writing achievement and the present study demonstrated only limited gains. One explanation may be that previous studies were pilot programs in which the setting was strictly a PALS Laboratory staffed by highly trained, highly motivated PALS teachers. The present study was in actual adult education centers which had been operating literacy programs for many years. The PALS Labs were an addition to their on-going program, not a sole literacy program. The teachers had varying degrees of training and enthusiasm for the program. The present study may be a more realistic evaluation of how PALS operates in "the real world" than previous more controlled studies.

Student Attitudes

While there was not inconclusive evidence of the superiority of the PALS program in producing literacy gains for the adults in this sample, there were several other indications of the success of the program. The dropout rate for the students in the PALS program was significantly lower (39% compared to 84%) than for the traditional program. This is a very important finding as there is such a high dropout rate in most adult literacy programs. One reason for this finding may be the students' general enthusiasm for working with computers and learning touch typing. As one student stated, "I never thought I would be using a computer." The opportunity to use this new technology may have kept students attending when they would not have done so in a traditional program. Also the PALS program has a definite ending point. Even though most students stated they would continue on with literacy classes after completing the PALS program, they felt they had "finished something." This may not have been true for students in the traditional program for whom individualized instruction "just kept going." However,

there was no difference in the attendance rates at the PALS and comparison centers [F (1,79) = .0023, $p < .96$].

Students who dropped out of the program gave no specific indication of dissatisfaction with the program. However, this may have been due to politeness; that is, their stated reasons may have masked disappointment with the program or their progress (or lack of it) in attaining their goals. Many of the students indicated unrealistic expectations for the program at the beginning; that is, they indicated that they expected to be reading fluently or to be ready for the GED class at the end of the 100-hours of instruction. In fact, the level of instruction in PALS is relatively basic so that even students successfully completing the PALS program are not fluent readers and writers. It is possible that some students dropped out of the program when they realized that they were not making the progress they expected.

Another reason for the lack of progress in the program may be that there were students with special instructional needs. It is possible that there were

adults with specific learning disabilities whose individualized needs were not met by the PALS program. There are many reasons, of course, for adults not being able to read. In some instances, these reasons are such that all they need is an opportunity for instruction. In other instances, however, what is needed is specialized instruction addressing the specific needs of that adult. In the latter case, no one literacy curriculum will be adequate; rather a more detailed diagnostic assessment and individualized literacy prescription with varied instructional methods and materials will be needed.

Adults with a very low level of functional literacy such as those in this study usually exhibit a whole constellation of problems, of which illiteracy is only one. They might be better served in a program that provides for more of these needs such as transportation, child care, and referrals for health care, employment, and social services. By providing such support services motivation and attendance might be increased, and realistic literacy gains realized.

Limitations of the Study

There are several limitations to the present evaluation study. First, it was an evaluation study conducted in actual adult education centers rather than an experimental study conducted under controlled circumstances. While this makes the study more realistic and the results more easily transferred to other "real world" sites, it means that the usual research controls were absent. The experimental treatment, the PALS program, may not have been fully implemented as indicated by the program author/publisher. Some teachers felt inadequately trained; partners were not used consistently; the personal writing phase may not have been thoroughly presented to all students. Some students had had previous literacy courses; some were receiving other literacy instruction concurrently. While these concerns suggest the program was not fully implemented to the author's specifications, it may, in fact, have been implemented more realistically for actual adult literacy programs in contrast to experimental sites.

Assessment was conducted by the teachers, not by the evaluators. Standard conditions may not have been met for administration of the assessment instruments. Students tended to "disappear" and not receive any post-test assessment, thus reducing greatly the number of subjects for the complete analysis. This particularly affected the comparison site. Further there was not a comparable "program" with a definite starting and ending point at the comparison site. Limitations of the reading assessment measures, particularly the TABE, and the small, unequal numbers of students in the pre-test/post-test groups may have contributed to the failure to obtain significant differences attributable to the PALS program. All of these limitations need to be kept in mind when considering the findings of this study.

CONCLUSIONS AND RECOMMENDATIONS

Adults in the PALS program performed as well as adults in a traditional non-computerized literacy program although neither group as a whole demonstrated significant progress on the reading or writing measures. There was a significantly lower dropout

rate, but no difference in the attendance rate for the PALS program than for the traditional program. Oral word reading increased significantly in one of the PALS centers; reading as measured by the TABE increased significantly at the other center but writing decreased significantly at that center. Student satisfaction with the PALS program was high, their attitudes toward the program were good, and they felt they improved their reading. Teachers were generally favorable toward the PALS program although they felt the need to use it in conjunction with other instructional methods and materials.

Strengths of the PALS program centered around the use of computers and the inclusion of touch typing skills in the instruction. Students also liked the immediate feedback and found the program to be fun and interesting. Teachers felt the phonemic approach was helpful, that the students liked the typing instruction, and that student self-esteem increased.

Weaknesses of the PALS program included the story (too long, boring, not designed for adults), the difficulty teachers had getting the writing program

(Phase 3) started, and problems with typing for the older students. Teachers were disappointed in the results and expressed a need for more adequate training in the use of the program.

The PALS program is expensive to install, although it is a short-term expense. It may be a beneficial addition to a literacy program especially if it is integrated in with other materials and instructional methods. It is not a panacea; that is, installation of a PALS program will not guarantee literacy success for all adult students.

Further research is needed to develop more adequate measures of literacy (instead of the TABE). Adult literacy programs need to give more careful attention to retaining students in programs once they have been recruited and to devising new ways to measure progress throughout the program (perhaps check points every few weeks) so that there are formative progress data for students who drop out before the end of the program. Incentives for remaining in programs, completing the planned literacy curriculum, and taking the post-test assessment measures need to be considered.

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Variable	Total (N=209)	PALS (N=135)		Comparison (N=74)	
		Day (n=69)	Evening (n=66)	Day (n=28)	Evening (n=46)
Age					
18-19 yrs.	15	5	3	2	10	6	4
20-29 yrs.	57	24	12	12	33	11	22
30-39 yrs.	60	47	24	23	13	5	8
40-49 yrs.	40	29	14	15	11	4	7
50-59 yrs.	24	20	12	8	4	2	2
60-69 yrs.	8	7	2	5	1	0	1
Gender:							
Female	98	66	43	23	32	17	15
Male	109	67	24	43	42	11	31
Race:							
Black	142	91	44	47	51	23	28
White	45	31	17	14	14	3	11
Asian	17	8	4	4	9	2	7
Hispanic	2	2	2	0	0	0	0
Other	1	1	0	1	0	0	0
Employment:							
Employed	122	77	21	56	45	15	30
Unemployed	85	56	46	10	29	13	16
Education:							
Grades 1-6	29	28	11	17	1	0	1
Grades 7-9	43	35	19	16	8	3	5
Grades 10-11	27	19	9	10	8	5	3
High School Graduate	54	41	19	22	13	5	8

Variable	Total (N=209)	PALS (N=135)		Comparison (N=74)	
		Day (n=69)	Evening (n=66)	Day (n=28)	Evening (n=46)
Native Language:					
English	183	124	64	60	59	25	34
Other	26	11	5	6	15	3	12
Previous Literacy Courses:					
Yes	72	66	33	33	6	1	5
No	134	66	34	32	68	27	41
Other Reading Courses:					
Yes	71	55	29	26	16	5	11
No	135	77	38	39	58	23	35

Note: Number may not total 209 due to missing data.

Table 2

TABE Scores

PALS Centers (N=42)

	M	s.d.	diff.	t	p
Pretest	2.52	1.15			
			- 0.34	- 1.96	.057
Postest	2.86	1.31			

Comparison Center (N=11)

	M	s.d.	diff.	t	p
Pretest	4.84	1.78			
			- 0.71	- 1.40	.193
Posttest	5.55	2.59			

Table 3

TABE Scores By Site

PALS Center at Columbus (N = 17)

	M	s.d.	diff.	t	p
Pretest	2.13	0.61	-0.55	-2.49	.024
Posttest	2.68	1.31			

PALS Center at Macon (N = 25)

	M	s.d.	diff.	t	p
Pretest	2.79	1.35	-0.20	-0.79	.436
Posttest	2.99	1.32			

Table 4

Writing Test Scores

PALS Centers (N=25)

	M	s.d.	diff.	t	p
Pretest	3.48	0.87	0.20	1.04	.307
Posttest	3.28	0.84			

Post-test

	N	M	s.d.	F	d.f.	p
PALS	47	3.34	0.92	1.77	1,54	.189
Comparison	9	3.78	0.83			

Table 5

Writing Scores By Site

PALS Center at Columbus (N = 12)

	M	s.d.	diff.	t	p
Pretest	3.50	0.80	0.67	2.97	.013
Posttest	2.83	0.94			

PALS Center at Macon (N = 13)

	M	s.d.	diff.	t	p
Pretest	3.46	0.97	-0.23	-0.90	.387
Posttest	3.69	0.48			

Table 6

Slosson Oral Reading Test Scores for PALS Center at Macon

	N	M	s.d.	diff.	t	p
Pretest	24	1.33	1.35	-2.94	-7.06	.000
Postest	24	4.27	2.04			

Table 7

Descriptive Data

Variable	Range or Code	Total Group M	Total Group s.d.	Total Group N	Experimental Group M	Experimental Group s.d.	Experimental Group N	Comparison Group M	Comparison Group s.d.	Comparison Group N
Age	18-69 years	35.91	12.29	205	38.94	11.87	133	30.32	11.10	72
Gender	1=Female 2=Male	1.53	.50	207	1.50	.50	133	1.57	.50	74
Race	1=Black 2=White 3=Asian 4=Hispanic	1.43	.73	207	1.43	.74	133	1.43	.70	74
Employment	1=Employed 2=Unemployed	1.41	.49	207	1.42	.50	133	1.39	.49	74
Education	Grades 0-13	9.46	4.40	153	9.04	4.49	123	11.17	3.54	30
Previous Literacy Courses	1=Yes 2=No	1.65	.48	206	1.50	.50	132	1.92	.28	74
Native Language	1=English 2=Other	1.12	.33	209	1.08	.28	135	1.20	.41	74
Other Reading Courses	1=Yes 2=No	1.66	.48	206	1.58	.50	132	1.78	.41	74
Dropout Status	1=Drop 2=Finish 3=Recycle	1.51	.61	209	1.36	.48	135	1.15	.36	74
TABE Pretest	2.6-4.9	3.81	2.03	203	2.87	1.48	129	5.46	1.79	74
TABE Posttest	2.6-4.9	3.35	1.87	59	2.85	1.23	48	5.56	2.59	11
Writing Pretest	0-6	3.58	.79	59	3.58	.79	59	--	--	--
Writing Posttest	0-6	3.41	.91	56	3.34	.92	47	3.78	.83	9

Variable	Range or Code	Total Group M	Total Group s.d.	Total Group N	Experimental Group M	Experimental Group s.d.	Experimental Group N	Comparison Group M	Comparison Group s.d.	Comparison Group N
Bio-Sketch	0-6	4.10	1.00	30	4.10	1.00	30	--	--	--
Functional Literacy Test	0-100%	64.57	21.92	42	64.57	21.92	42	--	--	--
Word Making Test	0-100%	78.40	15.80	25	78.40	15.80	25	--	--	--
Slosson Pretest	0-10	1.86	1.39	84	1.86	1.39	84	--	--	--
Slosson Posttest	0-10	4.27	2.04	24	4.27	2.04	24	--	--	--
Day or Evening	1=Day 2=Night	2.95	2.04	209	1.49	.50	135	1.62	.488	74
Attendance	Hours	77.35	80.56	202	90.55	87.82	134	49.99	55.18	67

Table 8

Significant Inter-correlations

	Age	Race	Employ-ment	Diploma	Previous Literacy Courses	ESL	Other Reading Courses	Dropout Status	TABE Pretest	TABE Posttest	Writing Pretest	Writing Posttest	Bio-sketch	Functional Literacy	Word Making Test	Slosson Pretest[2]	Slosson Posttest[2]	Day or Evening	Atten-dance	Gender
Age		n.s.	n.s.	n.s.	-.24 (.019)	n.s.	n.s.	.23 (.028)	n.s.	n.s.	—	n.s.	—	—	—	—	—	n.s.	n.s.	n.s.
Race	n.s.		n.s.	-.41 (.012)	-.31 (.003)	.60 (.000)	-.19 (.051)	n.s.	n.s.	n.s.	—	n.s.	—	—	—	—	—	.20 (.041)	n.s.	.27 (.011)
Employ-ment	n.s.	n.s.		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	—	n.s.	—	—	—	—	—	n.s.	n.s.	-.19 (.049)
Diploma	.28 (.001)	n.s.	-.21 (.011)		n.s.	-.31 (.046)	n.s.	n.s.	n.s.	n.s.	—	n.s.	—	—	—	—	—	n.s.	n.s.	-.37 (.035)
Previous Literacy Courses	-.37 (.000)	n.s.	n.s.	n.s.		-.22 (.030)	.20 (.040)	-.15 (.095)	n.s.	n.s.	—	n.s.	—	—	—	—	—	n.s.	n.s.	n.s.
ESL	n.s.	.56 (.000)	n.s.	n.s.	-.19 (.014)		n.s.	n.s.	-.19 (.054)	n.s.	—	n.s.	—	—	—	—	—	n.s.	n.s.	.24 (.021)
Other Reading Courses	n.s.	n.s.	-.25 (.002)	n.s.	.32 (.000)	-.30 (.000)		-.43 (.000)	.33 (.002)	n.s.	—	n.s.	—	—	—	—	—	n.s.	-.43 (.000)	n.s.
Dropout Status	n.s.	n.s.	n.s.	n.s.	-.17 (.023)	n.s.	n.s.		n.s.	n.s.	—	n.s.	—	—	—	—	—	n.s.	.60 (.000)	n.s.
TABE Pretest	n.s.	n.s.	n.s.	n.s.	.18 (.025)	-.15 (.048)	.17 (.029)	n.s.		.76 (.003)	—	.63 (.034)	—	—	—	—	—	n.s.	n.s.	n.s.
TABE Posttest	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	.59 (.000)		—	n.s.	—	—	—	—	—	n.s.	n.s.	n.s.
Writing Pretest	n.s.	.33 (.005)	-.31 (.013)	n.s.	.36 (.006)	n.s.	n.s.	n.s.	.39 (.001)	n.s.		—	—	—	—	—	—	—	—	—
Writing Posttest	-.37 (.005)	n.s.	n.s.	n.s.	.44 (.008)	-.43 (.001)	.24 (.050)	n.s.	.47 (.001)	.45 (.004)	.38 (.032)		—	—	—	—	—	n.s.	n.s.	n.s.
Bio-sketch	-.62 (.000)	-.31 (.046)	-.39 (.017)	n.s.	n.s.	-.41 (.012)	.31 (.045)	n.s.	.57 (.001)	n.s.	n.s.	.75 (.000)		—	—	—	—	—	—	—
Functional Literacy	n.s.	n.s.	-.55 (.000)	n.s.	n.s.	n.s.	n.s.	n.s.	.49 (.001)	.37 (.02)	n.s.	n.s.	n.s.		—	—	—	—	—	—
Word Making Test	n.s.	-.35 (.045)	n.s.	n.s.	.46 (.011)	n.s.	n.s.	n.s.	n.s.	.51 (.027)	n.s.	n.s.	n.s.	.53 (.026)		—	—	—	—	—
Slosson Pretest[2]	n.s.	n.s.	n.s.	n.s.	.29 (.033)	n.s.	n.s.	n.s.	.48 (.001)	.65 (.015)	n.s.	n.s.	n.s.	n.s.	n.s.		—	—	—	—
Slosson Posttest[2]	.51 (.045)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	.53 (.037)	.68 (.032)	n.s.	.54 (.043)	n.s.	n.s.	n.s.	n.s.		—	—	—
Day or Evening	n.s.	n.s.	-.54 (.000)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	.32 (.019)	n.s.	n.s.	n.s.		-.21 (.043)	.28 (.009)
Atten-dance	.42 (.000)	n.s.	.22 (.005)	.20 (.015)	-.38 (.000)	.15 (.039)	-.51 (.000)	.20 (.010)	-.23 (.004)	-.20 (.090)	n.s.	-.32 (.015)	-.53 (.001)	-.34 (.013)	n.s.	-.25 (.010)	n.s.	n.s.		-.21 (.045)
Gender	n.s.	n.s.	-.34 (.000)	n.s.	n.s.	-.19 (.013)	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	-.43 (.003)	n.s.	.29 (.000)	n.s.	

[1]Top half = Comparison Group
Bottom half = Experimental Group

[2]One experimental center only

— = not given

n.s. = not significant

Table 9

Teacher Interview: Initial

Question	Responses (Frequency)	
	PALS (N=10)	Non-Computerized (n=4)
1) Why did you choose to become a PALS Lab instructor?	Assigned (7) Computer-experience (2) Heard it's more effective (2)	n/a
2) Have you taught other literacy classes?	Yes (8) No (2)	Yes (2) No (2) (1) (1)
Where?	This center (5) Another adult education center (3)	
How long?	0-1 year (3) 2-5 years (4) 6-15 years (3)	(2) (1) (1)
What method/materials did you use?	Phonics (5) Laubach (4) Tapes (2) Sullivan (1) SRA (1) Self-developed (2) Computer software (1)	 (1) (1)
3) Did the PALS training prepare you to teach this this class? Why? Why not?	Yes (4) No (6) Hands-on (2) 4 days in Atlanta (1) Self-taught (4) Not enough hands on (1) 1 day too short (1) Not enough on personal writing (1) Follow up needed (1) Too general (1)	[Laubach (2)] [ESL (2)]

Question	Responses (Frequency)	
	PALS (N=10)	Non-Computerized (n=4)
4) What do you like about PALS program? Why?	Typing/Primary Editor (5) Computers (7) Work Journal (2) Writing program (1) Audio-visual repetition of sight words (3) Phonics (3) Students motivated, attending, feel good (3) Speaking & writing correctly (1) Multiple activities (1) Graphics and color (1) Partnering (1)	n/a
5) Is there anything you don't like about the PALS program? Why?	Story (5) Too Long (3) Boring (2) Child-like (1) Journal covers fall off (2) Lack of sight words (1) Typing difficult for older students (1) Partners (1) Computer breakdowns (1) Writing doesn't teach mechanics (1)	n/a
6) What are your expectations for the students in this class?	Raise reading level/ skills (10) Self esteem/enjoyment (2) Develop individually (1) Read paper Type (1) GED (2)	(4) (1)

Table 10

PALS Teacher Interviews Final

Question	Responses (Frequency N=10)
1) What do you like about the PALS program? Why?	Typing (10) Good for self esteem (3) Phonemic approach (4) Personal writing (3) Sight words with sound (1) Story (1) Computer allows self corrections (1) Adult level (1) Uses all sense modalities (1)
2) Is there anything you don't like about PALS? Why?	Story Start phonics sooner (6) Too long (2) Not for adults (2) Typing for older students (2) Equipment breakdown (1) Doesn't teach what it says it will (1) Extra work for teacher (1) Caters to low average (1) Too much repetition (1) Needs more repetition (1) Add typed stories and books (1) Need to teach mechanics (1) Personal writing hard to get started (6) Combination of methods/materials better (1) Quality of work journal (1) More print in work journal (1) Students don't like cassette for Bio-sketch (1) Needs strong partner for writing (1) Students at Gr. 4 & 5 should get into writing sooner (1) Bias (program & test) against older student (1)
3) Were your expectations for this class met?	Yes (4) Partially (2) No (3)
Why/why not?	Self-esteem improved (2) Personal writing more valid (1) Disappointed in student progress (2) Disappointed in attendance (1) It's a foundation but just a beginning (1) Need an integrated program, not just PALS (1) Needed more hands-on training (1)

Table 11

Student Interviews: Initial

Question	Responses (Frequency N=28)
1) Why did you choose to participate in the PALS program?	Told to go (no choice of program) (10) Radio/TV "ads" (8) To learn to read (9) To further my education (7) Family/friend suggested it (5) To learn computers (1) To learn to type (1) To learn English (2) It sounded interesting (1)
2) What do you like about working on the computer?	InfoWindow (12) Everything (6) Typing (4) It tells you how to pronounce words (4) It tells you how to spell words (2) It's interesting (3) Easy to use (4) Computers are for special people (2) Games (2) Funny story (2) Phonics skills (2) Teacher (1) Work at your own speed (1) Teaches you to follow instructions (1)
3) Is there anything you don't like about working on the computer?	Nothing (22) Goes too fast (4) Typing (4) Not as good as a tutor (2) Only one way of telling you (1) Gives me a headache (1) Tells me to try again (1) Not a human (1) I'm scared of it (1)
4) What do you hope to accomplish in this class? Why?	Read and write better (16) Write letter to mother/children (2) Read the paper (6) Learn computers (4) To write a check (1) To read the Bible (2) To spell (3) To read car manual (1) To read job application (1) To read faster (1) To speak better (4) To get a job (15) To get GED/further education (9) To master things better (4) To have something worthwhile to talk about (1) To be independent (1)

Table 12

Student Interviews: Final

Questions	Responses (Frequency N=41)
1) Would you recommend the PALS program to a friend?	Yes (41) No (0)
Why?	Learn better (10) It helped me (10) Help learn reading and writing (6) I was successful. (2) Learn about computers (4) Learn to pronounce words (1) Learn to spell (1) Enjoy it/interesting (3) Learn to type (2) Never too late! (1) Teachers (1)
2) What do you like about working on the computers?	Typing (13) Feedback (10) It's fun/relaxing (5) The computer (7) Spelling (4) Sounds (4) Writing stories (2) Learn words (2) Improve reading (3) Feel important (1) Makes you think (1) Doesn't let you cheat (1)
3) Is there anything you don't like about working on the computer?	Nothing (32) Typing (keys too small) (5) Like group class best (4) InfoWindow (too easy) (1) Writing stories (too hard) (1) Embarrassing to ask for help (1) Cost (1)
4) What changes have occurred in your reading as a result of PALS class?	Read better (22) Pronounce words (10) Understand better (3) Spell better (3) Write better (3) Read with children/newspaper or book/ words on TV (6) Letter sounds (1) Typing has improved (1) Got a job (1) Am less shy (1)

Questions	Responses (Frequency N=41)
5) Is there anything about your reading you still want to improve?	Reading (17) Pronounce harder words (15) Spelling (10) Reading speed (6) Comprehension (3) Writing (3) Math (1) Conversation (1)
6) Do you plan to continue in a literacy class?	Yes (27) No (14)
If not, what?	GED (3) Computer class (2) Trade school (2) Reading on TV (1) Program at college (2) Math class (1) Conversation class (1) Not a writing class (1) Tutor (1) PALS again (1)

Reasons for Dropping Out

Unknown (32)
Job (3)
Health (10)
Child Care/Family (7)
Another class or tutor (4)
Transportation (2)
Moved (3)
Classtime (2)
Other (5)

Appendix A

Writing Test & Scoring System

Student Data Sheet

Part 1

1) My name is _____.

2) I am a _____ (male/female).

3) I am _____ years old and I live with my _____ (father, mother, husband or wife, family, alone).

4) My favorite day of the week is _____.

5) The TV program I like the most is _____.

6) My favorite course in school is/was _____.

7) I like it because _____

_____.

8) The one course in school I don't or didn't like is _____

_____.

9) I disliked it because _____

_____.

10) In my free time I really enjoy _____

_____

_____.

11) When I get a job I'd like to be a _____.

OR: My job now is _____.

13) If you would like to, please write a few sentences about the person you would most like to meet and why you would like to meet him or her.

12) Write 3 or more sentences about yourself in the next 5 minutes.

12/2/88

Process Writing Scoring Guide

6 Ideas are very well developed and expressed.
The writing has fully developed structure.
The ideas are connected logically and are well organized.
There is good sentence variety and expression.

5 Ideas are fairly well developed and expressed.
The writing has a discernible structure.
The ideas are connected logically, but they are not so fully developed or so well organized as score 6 papers.

4 Ideas are only loosely connected or not developed.
The structure may be disjointed, but what is provided is clearly more than a list.
The ideas are relevant but are not developed or expressed well.
The sentence structure may be repetitive.

3 Ideas lack development.
The writing often merely lists ideas.
The phrasing and sentence structure are repetitious.

2 Ideas have litte or no relationship to the topic.
An idea or a list is provided that is not connected logically to the topic.

1 Lack of ideas.
All that is presented is a restatement of the question or topic to be addressed.

UN Undecipherable

BL Blank

Final Writing Task

Please write an essay on the topic below. Do not be concerned about spelling or punctuation. Just write down your ideas. Take as long as you need to finish.

[Examiner: At the end of 10 minutes have the student put an * in the left margin to show where she/he is working at that time.]

Student ID#: _____ Date: _____

If you had one million dollars to give away, who would you give it to?

Why?

Appendix B

Teacher and Student Interview Forms

Teacher Interview: Initial

Teacher ID#: _____ Interviewer: _____ Date: __/__/8_

1. Why did you choose to become the PALS Lab literacy instructor?

2. Have you taught other literacy classes before?
Where?

How long?

What method/materials did you use before?

3. Did the PALS training prepare you to teach this class?
Why/Why not?

4. What do you like about the PALS program?

Why?

5. Is there any thing you don't like about the PALS program? What?

Why?

Check to see which of the components are mentioned in the above responses. Ask about any not mentioned.

Story (Invention of the Alphabet)

Work Journal (Phonemic Alphabet)

Touch Typing

Personal Writing

6. What are your expectations for the students in this class?

Teacher Interview: Final

Teacher ID#: _____ Interviewer: _____ Date: __/__/8_

1. What do you like about the PALS program?

   Why?

2. Is there any thing you don't like about the PALS program? What?

   Why?

   Check to see which of the components are mentioned in the above responses. Ask about any not mentioned.

   Story (Invention of the Alphabet)

   Work Journal (Phonemic Alphabet)

   Touch Typing

   Personal Writing

3. Were your expectations for this class met? Why/Why not?

Student Interview: Initial

Student ID#: _____ Interviewer: _____ Date: __/ __/88

1. Why did you choose to participate in the PALS program?

2. What do you like about working on the computer?

3. Is there anything you don't like about working on the computer?

4. What do you hope to accomplish in this literacy class?

Why do you want to improve your reading?